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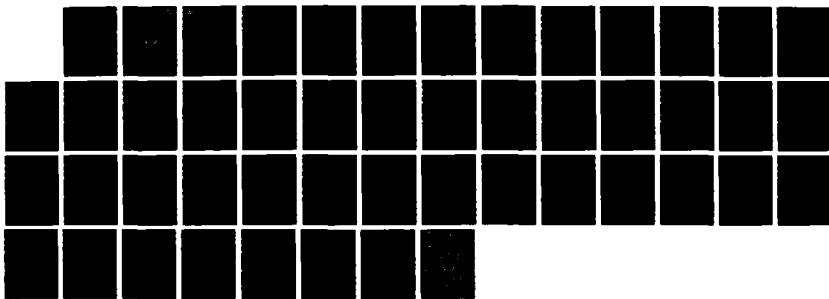
THE NAVY JOB PERFORMANCE MEASUREMENT (JPM) PROGRAM:  
LIFE-CYCLE AUTOMATION. (U) NAVY PERSONNEL RESEARCH AND  
DEVELOPMENT CENTER SAN DIEGO CA. H K GRIZZLE ET AL.  
APR 88 NPRDC-TN-88-33

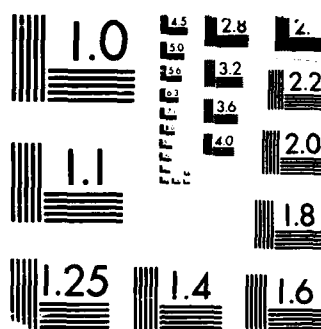
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# Navy Personnel Research and Development Center

San Diego, CA 92152-6800 TN 88-33 April 1988



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## The Navy Job Performance Measurement (JPM) Program: Life-Cycle Automation Management Plan for a JPM Date Base

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NAVY PERSONNEL RESEARCH AND DEVELOPMENT CENTER  
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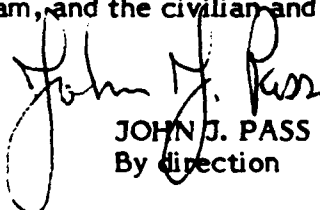
From: Commanding Officer, Navy Personnel Research and Development Center

Subj: **THE NAVY JOB PERFORMANCE MEASUREMENT (JPM) PROGRAM: LIFE-CYCLE AUTOMATION MANAGEMENT PLAN FOR A JPM DATA BASE**

Encl: (1) NPRDC TN 88-33

1. This report details the creation of a Life-Cycle Automation Management Plan (LAMP) for the development and implementation of a rating-specific data base that the Navy will use to manage job performance information. This research was funded through Work Unit No. Z1770.

2. The information contained in this report is intended to benefit the Navy, the Department of Defense JPM Program, and the civilian and military research communities.

  
JOHN J. PASS  
By direction

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Justification	
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**The Navy Job Performance Measurement (JPM) Program:  
Life-Cycle Automation Management Plan  
for a JPM Data Base**

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## REPORT DOCUMENTATION PAGE

1a. REPORT SECURITY CLASSIFICATION <b>UNCLASSIFIED</b>			1b. RESTRICTIVE MARKINGS		
2a. SECURITY CLASSIFICATION AUTHORITY			3. DISTRIBUTION/AVAILABILITY OF REPORT Approved for public release; distribution is unlimited.		
2b. DECLASSIFICATION/DOWNGRADING SCHEDULE			5. MONITORING ORGANIZATION REPORT NUMBER(S)		
4. PERFORMING ORGANIZATION REPORT NUMBER(S) TN 88-33			7a. NAME OF MONITORING ORGANIZATION		
6a. NAME OF PERFORMING ORGANIZATION Navy Personnel Research and Development Center		6b. OFFICE SYMBOL (If applicable) Code 62	7b. ADDRESS (City, State, and ZIP Code)		
6c. ADDRESS (City, State, and ZIP Code) San Diego, CA 92152-6800			9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER		
8a. NAME OF FUNDING/SPONSORING ORGANIZATION		8b. OFFICE SYMBOL (If applicable)	10. SOURCE OF FUNDING NUMBERS		
8c. ADDRESS (City, State, and ZIP Code)			PROGRAM ELEMENT NO 63707N	PROJECT NO Z1770	TASK NO Z1770.1
11. TITLE (Include Security Classification) The Navy Job Performance Measurement (JPM) Program: Life-Cycle Automation Management Plan for a JPM Data Base					
12. PERSONAL AUTHOR(S) Grizzle, Keeneth; Baker, Herbert George; Laabs, Gerald J.					
13a. TYPE OF REPORT Interim		13b. TIME COVERED FROM 1986 TO 1987		14. DATE OF REPORT (Year, Month, Day)	
				15. PAGE COUNT 45	
16. SUPPLEMENTARY NOTATION					
17. COSATI CODES			18. SUBJECT TERMS (Continue on reverse if necessary and identify by block number)		
FIELD	GROUP	SUB-GROUP	Job performance measurement, joint-service research data base management		
05	09				
19. ABSTRACT (Continue on reverse if necessary and identify by block number)					
This report details the creation of a Life-Cycle Automation Management Plan (LAMP) for the development and implementation of a rating-specific data base that the Navy will use to manage job performance information.					
20. DISTRIBUTION/AVAILABILITY OF ABSTRACT <input checked="" type="checkbox"/> UNCLASSIFIED/UNLIMITED <input type="checkbox"/> SAME AS RPT <input type="checkbox"/> DTIC USERS			21. ABSTRACT SECURITY CLASSIFICATION UNCLASSIFIED		
22a. NAME OF RESPONSIBLE INDIVIDUAL Baker, Herbert George			22b. TELEPHONE (Include Area Code) (619) 553-7639		22c. OFFICE SYMBOL Code 62

## SUMMARY

### Problem

The Navy Personnel Research and Development Center (NAVPERSRANDCEN) is developing a prototype JPM Data Base containing rating-specific information that may be used by operational Navy components not only to link job performance with enlistment standards but for other management purposes as well, such as assessing training effectiveness. The prototype data base may also be used by researchers to evaluate tests and measures. A step-by-step plan is required to develop and demonstrate the prototype data base.

### Objective

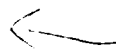
The objective of this effort was to create a Life-Cycle Automation Management Plan (LAMP) for the development and implementation of a rating-specific data base that the Navy will use to manage job performance information.

### Method

In preparation for developing the LAMP, documents were reviewed pertaining to the life-cycle management of automated information systems (AIS). These included Secretary of the Navy Instructions, Naval Data Automation Command (NAVDAC) Publications, DoD Standards and Directives, and Federal Information Processing Standards Publications (FIPS PUBS).

### Results

The tasks and decisions for each of five life-cycle phases include: Phase I, Mission Analysis and Project Initiation; Phase II, Concept Development; Phase III, Definition and Design; Phase IV, System Development; and Phase V, Deployment and Operation. NAVPERSRANDCEN will be responsible for completing all tasks in Phase I, and participating in the research and development (R&D) tasks and decisions. Other Navy organizations will be responsible for completing the remaining phases.



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## INTRODUCTION

### Problem

As part of its contribution to the Joint-Service Job Performance Measurement (JPM)/Enlistment Standards Project, the Navy is: (1) establishing relationships among several types of measures of technical proficiency (e.g., job sample tests, job sample simulations, and rating scales), and (2) evaluating the predictive relationships among these measures and scores on the Armed Services Vocational Aptitude Battery (ASVAB).

The Navy Personnel Research and Development Center (NAVPERSRANDCEN) is developing a prototype JPM Data Base containing rating-specific information that may be used by operational Navy components not only to link job performance with enlistment standards but for other management purposes as well, such as assessing training effectiveness. The prototype data base may also be used by researchers to evaluate tests and measures. A step-by-step plan is required to develop and demonstrate the prototype data base.

### Objective

The objective of this effort was to create a Life-Cycle Automation Management Plan (LAMP) for the development and implementation of rating-specific data base that the Navy will use to manage job performance information.

### Background

Previous reports detailed the genesis of the Joint-Service Project and the inception and status of the Navy JPM Program (Laabs & Berry, 1987).<sup>1</sup> In support of the joint-service effort, NAVPERSRANDCEN contracted the Federal Computer Performance Evaluation and Simulation Center (FEDSIM) to construct a LAMP for a prototype JPM Data Base.

## METHOD

In preparation for developing the LAMP, documents were reviewed pertaining to the life-cycle management of automated information systems (AIS). These included Secretary of the Navy Instructions, Naval Data Automation Command (NAVDAC) Publications, DoD Standards and Directives, and Federal Information Processing Standards Publications (FIPS PUBS). A complete list of documents used during the preparation of the LAMP is provided in Appendix A.

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<sup>1</sup>Laabs, G. J., & Berry, V. M. (1987). The Navy job performance measurement program: Background, inception, and current status (NPRDC Tech. Rep. 87-34). San Diego: Navy Personnel Research and Development Center.

### Use of NAVDAC Publications

NAVDAC Publications 24.1, "Project Management Plan," and 24.2, "System Decisions" were used as the basis for designing the LAMP for the prototype JPM Data Base because they apply to the NAVPERSRANDCEN environment. The NAVDAC publications are intended for use by all Navy non-tactical Automatic Data Processing (ADP) activities, and they apply to all Navy ADP actions including: (1) AIS development, modification, and revisions; (2) hardware procurements; and (3) service contracts.

NAVDAC Publication 24.1 describes five phases of life-cycle management (LCM):

- Phase I: Mission Analysis and Project Initiation
- Phase II: Concept Development
- Phase III: Definition and Design
- Phase IV: System Development
- Phase V: Deployment and Operation

The LCM phases are similar to LCM approaches followed by other DoD and Federal agencies.

NAVDAC Publication 24.2 discusses the requirements for the Mission Element Needs Statement (MENS) and the required content for each System Decision Paper (SDP). An SDP is required at the end of life-cycle Phases II, III, IV, and V.

### Task Definition

While the NAVDAC publications explained the overall approach and specific plans that were needed for AIS development, they did not detail specific procurement tasks necessary to acquire the resources needed to develop the JPM Data Base. Within each phase, multiple tasks must be performed. Tasks were defined using previous FEDSIM experience with life-cycle management in addition to the guidance found in NAVDAC Publications 24.1 and 24.2. Each task is described and an estimate was made of the elapsed time (in work days), level of effort (denoted by person-days) and cost to complete each task.

### Estimating Methodology

The level of effort estimated for each task should allow for the completion of the task and the documentation required by the cited document reference. Extra time may be needed for report preparation and contract monitoring if work is not performed in-house.

Elapsed time estimates are based on FEDSIM experience-based judgments of approximately how long a task should take, using an estimate of five working days as a minimum elapsed time for each task. The elapsed time estimates in the LAMP are in increments of five working days.

The average number of persons assigned to each task was calculated by dividing the estimated person-days by the elapsed time.

Costs for each task were estimated by multiplying a daily FEDSIM analyst rate (\$320 per day) by the number of person-days required to complete the task. The daily rate was calculated to allow for nonproductive time (training, leave, holidays), assuming that 72 percent of staff time is actually available for project work.

### LAMP Scope

The LAMP will be used by NAVPERSRANDCEN to manage the prototype JPM Data Base from definition and design to prototype deployment. The LAMP includes only the tasks and decisions for prototype design, development, and operation. If the prototype is approved, further modification and installation may be needed. That is, a revised life-cycle plan may be needed for full-scale data base development.

## **LIFE-CYCLE AUTOMATION MANAGEMENT PLAN**

The LAMP for the JPM Data Base is divided into two parts. Part 1 discusses the LAMP organization, describes the structure of each life-cycle phase, and explains the use of the LAMP. Part 2 defines each of the five life-cycle phases and provides estimates of time and costs to accomplish the tasks in each phase.

Appendix B provides supporting information on the LAMP. It contains a LAMP Schedule Chart that shows a sequence of tasks, major decision points, and estimated task duration. For each task, it specifies: (1) earliest start date, (2) earliest finish date (located in the upper left corner), and (3) a corresponding task number or decision letter. Thus, it can be used to estimate the impact of a resource or time change on project duration.

### Organization of the LAMP

The LAMP provides the following information for each task:

- Task Description
- Product/Result
- Document Reference
- Level of Effort
- Elapsed Time
- Average Staff Required
- Estimated Cost

The LAMP provides the following information for each decision:

- Discussion of Options
- The "Yes" Path
- The "No" Path

### Planning Considerations

Key considerations for planning include project management, compliance with regulations, review and approval of products and documents, and funding and staff availability.

One of the tasks in the LAMP requires the development of a Project Manager Charter (PMC). The Data Base Project Manager is responsible for the overall management of the JPM Data Base project, including the schedule, costs, and allocations of resources. Because ADP procurement regulations are subject to change, the Data Base Project Manager must review procurement updates regularly and consult periodically with ADP procurement or contract personnel.

The LAMP has been designed as an "evolutionary" document that the Navy will modify to reflect task and program changes throughout the life-cycle of the prototype JPM Data Base. Each document produced or product developed must be reviewed in accordance with the plan. Milestone delays or cost increases should be documented in monthly status reports and the SDPs required at the end of Phases II, III, IV, and V.

The schedule provided as Appendix B assumes that sufficient funding and staffing will be available for the duration of the project. A change in either of these key resources will directly affect staff and cost estimates.

#### Use of the LAMP

The LAMP is for use by the JPM Data Base Project Manager to manage the prototype development process. The concept of life-cycle management used involves the process of administering an AIS over its whole life with emphasis on strengthening early decisions that shape AIS costs and utility.

The LAMP provides a high-level, systematic, and dynamic approach to prototype development that allows the rearrangement of tasks as environments change. Tasks within each phase are defined at a high level, but do not include descriptions of how they should be performed.

#### LAMP Phases and Tasks

This part of the LAMP lists and describes the tasks and decisions for each of five life-cycle phases: Phase I, Mission Analysis and Project Initiation; Phase II, Concept Development; Phase III, Definition and Design; Phase IV, System Development; and Phase V, Deployment and Operation. NAVPERSRANDCEN will be responsible for completing all tasks in Phase I, and participating in the research and development (R&D) tasks and decisions listed in Table 1. Other Navy organizations, which will be specified at a later date, will be responsible for completing the remaining phases.

Table 1  
NAVPERSRANDCEN LAMP Participation

Phase Number	NAVPERSRANDCEN Participation	
	Task Number	Decision Letter
I	All Tasks	All Decisions
II	6, 7, 8, 9, 11, 13, 24, 25, 26	None
III	27, 28, 29, 30, 36, 40	G
IV	41, 43, 46, 54, 56	None
V	59	None

Before Phase I can begin, a Needs Assessment for the prototype JPM Data Base must be completed. The Needs Assessment is a formal document that identifies potential JPM

Data Base users, and what capabilities and characteristics the users desire. This needs assessment is in progress.

A description of each life-cycle phase and the tasks and decisions within each follows. Each task is numbered and each decision is lettered for easy cross-reference to the flow chart in Appendix B.

#### Phase I: Mission Analysis and Project Initiation

Phase I begins when management becomes aware of a mission deficiency or need to improve mission accomplishment, and ends with approval of a MENS. The MENS provides a concise statement of the deficiency or need for improvement, its importance, and any significant time, cost, or other constraints and assumptions that could apply to exploration and acceptance of alternative solutions.

##### Task 1: Prepare Draft Mission Element Need Statement.

Description: The MENS identifies a specific deficiency within a mission area and places a relative priority of the deficiency within the mission area. The MENS focuses on the factor(s) causing the deficiency, and the dates when the deficiency must be corrected or new capability must be deployed. The deficiency identified in the MENS is defined as narrowly as possible so there is a reasonable probability of correcting the deficiency by developing or modifying a single system. The MENS also provides a general magnitude of personnel and economic resources that will be needed to correct the deficiency. The Needs Assessment completed prior to Task 1 may be used to complete some portions of the MENS.

Product/Result: Draft MENS (less than six pages)  
Document Reference: NAVDAC Publication 24.2  
Level of Effort (person-days): 25  
Elapsed Time (days): 15  
Average Staff Required: 1.7 people  
Estimated Cost: \$8,000

##### Task 2: Functional Sponsor Review and Approval of Draft MENS.

Description: The MENS is reviewed by the project's Functional Sponsor. The Functional Sponsor may be located in a Navy Command that reviews research and development project activities. The Functional Sponsor will validate the need and certify the intent to program funding prior to each LAMP phase.

Product/Result: Approved Draft MENS  
Document Reference: NAVDAC Publication 24.2  
Level of Effort (person-days): 5  
Elapsed Time (days): 5  
Average Staff Required: 1 person  
Estimated Cost: \$1,600

##### Task 3: Data Communications Authority Reviews Draft MENS.

Description: The NAVDAC and a data communications analyst from NAVPERS-RANDCEN should review the MENS in the capacity of a data communications authority and comment on the data communications requirements contained in the MENS, especially

in the area of secure communications. Early coordination with a data communications authority can help speed up detailed planning later in the project.

Product/Result: Revised Draft MENS  
Document Reference: NAVDAC Publication 24.2  
Level of Effort (person-days): 7  
Elapsed Time (days): 5  
Average Staff Required: 1.4 people  
Estimated Cost: \$2,240

Task 4: ADP Approval Authority Approves MENS.

Description: If the MENS indicates an investment over \$300,000, NAVDAC will be the ADP Approval Authority. If the MENS is under \$300,000, another Navy activity will be assigned as the ADP Approval Authority for the JPM Data Base. The ADP Approval Authority will determine if there are other AIS in existence that could satisfy NAVPERS-RANDCEN requirements. The ADP Approval Authority can make revisions, and complete the MENS for "coordination." A copy of the approved MENS will be kept on file with the ADP Approval Authority.

Product/Result: Approved MENS for coordination  
Document Reference: NAVDAC Publication 24.2  
Level of Effort (person-days): 14  
Elapsed Time (days): 10  
Average Staff Required: 1.4 people  
Estimated Cost: \$4,480

Task 5: Navy Coordinates on MENS.

Description: Appropriate Navy activities review and concur on the MENS. All involved Commands will verify the logistics and other program information before submitting their concurrence/nonconcurrence.

Product/Result: All involved parties concur on MENS  
Document Reference: NAVDAC Publication 24.2  
Level of Effort (person-days): N/A  
Elapsed Time (days): 10  
Average Staff Required: N/A  
Estimated Cost: N/A

Decision A: MENS Validated.

Discussion: Upon completion of the MENS concurrence, NAVPERSRANDCEN and NAVDAC (if appropriate) decide whether to fully or partially validate the MENS. A partial validation indicates that there are some minor changes to be made, but the process to obtain funding can now start.

Yes: Go to Decision B.

No: Resolve issues, revise, and re-submit for approval and validation.

Decision B: Funds Available.

Discussion: After the MENS is validated, NAVPERSRANDCEN should determine if and where funds are available for the JPM project. If reprogrammable funds are

applicable and available, are they enough to cover the entire estimated life-cycle cost of the project? Partial funding may be obtained to begin project work, however, the effort to obtain additional funds must continue to keep the project underway. NAVPERSRANDCEN should also investigate the possibility of funding the project using an existing Program Objectives Memorandum (POM). If NAVPERSRANDCEN decides to use a POM, planning should begin at least two years in advance of when the funds are desired.

Yes: Go to Phase II, Concept Development.

No: Investigate additional sources of funding or delay project until funds are available.

### Phase II: Concept Development

Phase II begins when the Functional Sponsor and Project Manager start to solicit and compare different solutions to the problem described by the MENS, and ends with approval of an SDP at the end of Phase II. The SDP will recommend one or more workable solutions for detailed evaluation.

#### Task 6: Prepare Project Manager Charter.

Description: The PMC describes the project mission, objectives and scope, project staff responsibilities and accountabilities, relationships between project staff, channels of communications, and terms of project transition and disestablishment. To staff the project, the Functional Sponsor appoints a Functional Manager who then appoints a Project Manager (PM), ADP Manager, and a Data Communications Manager. The PM should come from the JPM community and have some knowledge of ADP. The PMC is an agreement between the PM and Functional Manager on the scope of the initiative, and serves as project road map. The PM and Functional Manager both sign and date the PMC. Signed copies should be sent to all those involved in the MENS and other officials identified in the PMC.

Product/Result: Appointment of PM and signed PMC

Document Reference: NAVDAC Publication 24.1, NAVDAC Advisory Bulletin, #32, 20 May 1982

Level of Effort (person-days): 15

Elapsed Time (days): 10

Average Staff Required: 1.5 people

Estimated Cost: \$4,800

#### Task 7: Prepare Mission Security Guide.

Description: Identification of ADP security issues should begin early in the project to prevent costly mistakes later. A Mission Security Guide should be prepared in Phase II to establish a security program for the prototype JPM Data Base. The Mission Security Guide is an "evolutionary" document that should be updated as the security practices are modified. The Navy requires that all ADP facilities must be accredited by their appropriate Designated Approving Authorities (DAAs). ADP systems within the Navy that have not been accredited will not be operated. ADP systems must be reviewed and accredited every 5 years.

Development of a new system or certain changes to existing systems containing privacy data must be announced in the Federal Register 30 days prior to implementation. Thereafter, an annual announcement of the existence of the system is required. Each

activity is responsible for the protection of its privacy data. NAVPERSRANDCEN should review the Privacy Act compliance procedures and then determine if the proposed JPM Data Base is applicable to the Act.

Product/Result: Completed initial Mission Security Guide and Review of Privacy Act  
Document References: NAVDAC Publication 24.1; DoD Directive 5400.11; OPNAV-INST 5239.1A, 5440.8G, 3050.18A; FIPS PUBS 41, 46, 48, 73, 83, and 87; GAO Audit Guide, "Evaluating Internal Contracts for Computer-Based Systems"; and U.S. Department of Commerce--RP-1, "Standard Practice for the Fire Protection of Essential Electronic Equipment Operations"

Level of Effort (person-days): 7

Elapsed Time (days): 5

Average Staff Required: 1.4 people

Estimated Cost: \$2,240

#### Task 8: Prepare Plan of Action and Milestones.

Description: Project activities and events should be documented in graphic form in a Plan of Action and Milestones (POA&M). The POA&M includes activities and deliverable end products that are essential to successful accomplishment of the project. The POA&M should identify all major events and actions, dates to provide a sound basis for exercising management control. The POA&M is an "evolutional" document that should be modified with additional details as the project progresses through the life-cycle.

Product/Result: Completed POA&M

Document References: NAVDAC Publication 24.1

Level of Effort (person-days): 28

Elapsed Time (days): 20

Average Staff Required: 1.4 people

Estimated Cost: \$8,960

#### Task 9: Define General Functional Requirements.

Description: The General Functional Requirements (GFR) document is a statement of user requirements containing quantitative and qualitative details describing required performance characteristics. The GFR should describe the existing deficiencies and the functions that the prototype JPM Data Base should perform to correct the deficiency. The GFR serves as the baseline for prototype development.

Product/Result: GFR with charts and graphs

Document References: NAVDAC Publication 24.1, FAR 7.1, FIRMR 201-30.007

Level of Effort (person-days): 120

Elapsed Time (days): 50

Average Staff Required: 2.4 people

Estimated Cost: \$38,400

#### Task 10: Perform Risk Analysis.

Description: A risk analysis should be performed by the Functional Sponsor early in the Concept Development Phase and throughout the project life-cycle. The risk analysis points out hazards that can effect the physical environment, personnel, equipment, file content, and processing capability of the proposed JPM Data Base.



Product/Result: Preliminary risk analysis complete with management commitment to continue the process throughout the project  
Document References: FIPS PUB 65  
Level of Effort (person-days): 15  
Elapsed Time (days): 10  
Average Staff Required: 1.5 people  
Estimated Cost: \$4,800

Decision C: General Functional Requirements Validated.

Discussion: The information collected in the GFR should provide enough detail to permit the identification, selection, and study of alternative architectures, but should not be confused with the technical specifications needed for later procurement of hardware, software, or data communications. A review of the GFR should be completed to determine if a system satisfying the GFR would meet the objectives of the JPM Data Base prototype. The GFR must be approved before advancing to the next task.

Yes: Go to Task 11.

No: Review, revise, and submit for revalidation.

Task 11: Conduct Technology Survey of Existing Systems.

Description: NAVPERSRANDCEN should investigate existing systems that have similar requirements to the prototype JPM Data Base. An existing technology review will aid preparation of the Feasibility Study Document and may serve as one of the alternatives to be evaluated.

Product/Result: Existing systems technology survey  
Document References: NAVDAC Publication 24.1  
Level of Effort (person-days): 7  
Elapsed Time (days): 5  
Average Staff Required: 1.4 people  
Estimated Cost: \$2,240

Task 12: Develop and Rank Criteria for Evaluating Alternatives.

Description: A method for evaluating system design alternatives must be documented before evaluation can begin. The Functional Sponsor should identify evaluation criteria and rank (if possible) them by degree of importance. Examples of possible criteria include: flexibility, ease of operation, physical facilities, and personnel. The criteria should address both tangible and intangible benefits. Economic issues should not be introduced in this task.

Product/Result: Evaluation Criteria for Feasibility Study  
Document Reference: FIPS PUB 64  
Level of Effort (person-days): 20  
Elapsed Time (days): 10  
Average Staff Required: 2.0 people  
Estimated Cost: \$6,400

Task 13: Identify Feasible Prototype Design Alternatives.

Description: The Functional Sponsor or Project Manager should identify alternatives, including any acceptable existing systems. Detailed cost estimates are produced and a

sensitivity analysis on the costs and benefits of each alternative is performed. The sensitivity analysis asks, "what if" type questions based on key factors (e.g., resource, environment, and/or operational changes).

NAVPERSRANDCEN should investigate existing data bases and determine whether they satisfy, or can be modified to satisfy, the proposed JPM Data Base requirements. NAVPERSRANDCEN should also consider interoperability issues concerning the proposed JPM Data Base, especially the possible impact on other DoD agencies.

Product/Result: Alternatives Analysis  
Document Reference: FIPS PUB 64  
Level of Effort (person-days): 80  
Elapsed Time (days): 35  
Average Staff Required: 2.3 people  
Estimated Cost: \$25,600

Task 14: Compare Alternatives to GFR and Criteria List.

Description: The Functional Sponsor should compare the feasible alternatives to the requirements specified in the GFR and to the criteria outlined in Task 12. Alternatives satisfying the GFR should be selected for a cost/benefit study.

Product/Result: Comparison and selection of alternatives for further analysis  
Document Reference: NAVDAC Publication 24.1  
Level of Effort (person-days): 7  
Elapsed Time (days): 5  
Average Staff Required: 1.4 people  
Estimated Cost: \$2,240

Task 15: Conduct Economic Analysis of Alternatives.

Description: Economic Analyses (EAs) must be performed whenever decisions involve a choice or trade-off between two or more options. The costs and benefits of each major alternative must be evaluated before decisions are made. For example, this initial EA may evaluate any existing systems and the non-automated and automated alternative. Good assumptions are necessary and it is important to understand that an EA is required before making a choice throughout the life-cycle. A sensitivity analysis is also required to understand how the system fluctuates depending on the alignment of resources.

Product/Result: Economic Analysis  
Document References: NAVDAC Publications 15 and 24.1; SECNAVINST 7000.14B and 4860.44C; and FIRMR 201-30.009  
Level of Effort (person-days): 22  
Elapsed Time (days): 20  
Average Staff Required: 1.1 people  
Estimated Cost: \$7,040

Task 16: Review Applicability of OMB Circular A-76.

Description: The requirements of OMB Circular A-76 (Revised), "Performance of Commercial Activities," are reviewed for their applicability to the prototype JPM Data Base. The A-76 review should be documented.

Product/Result: Documented Review of A-76 applicability  
Document References: OMB Circular A-76 (Revised)  
Level of Effort (person-days): 7  
Elapsed Time (days): 5  
Average Staff Required: 1.4 people  
Estimated Cost: \$2,240

Decision D: Is an A-76 Cost Comparison Study Applicable?

Discussion: If Task 16 reveals that A-76 is applicable, a detailed cost comparison of developing and maintaining all or selected aspects of the prototype JPM Data Base using in-house or contractor resources must be made. Consult OMB Circular A-76 (Revised) for more detailed information.

Yes: Go to Task 17.  
No: Go to Task 19.

Task 17: Conduct A-76 Cost Comparison Study.

Description: An A-76 study is time consuming and expensive. The detailed A-76 cost comparison involves preparation of a management study, a performance work statement, a quality assurance surveillance plan, and the cost comparison. The results of the cost comparison will affect the conduct of the remainder of the tasks since the comparison determines the extent of the use of contractors.

Note. In this LAMP, the only decision point shown in this plan concerning the use of contractors is the software development decision. The LAMP may need revision if the cost comparison shows a substantial use of contractors.

Product/Result: Management Study, Performance Work Statement, Quality Assurance Surveillance Plan, and Cost Comparison  
Document Reference: OMB Circular A-76 (Revised) and the Supplement  
Level of Effort (person-days): 25  
Elapsed Time (days): 10  
Average Staff Required: 2.5 people  
Estimated Cost: \$8,000

Task 18: Recommend Alternative and Estimate Budget.

Description: Using the information gathered from the previous tasks, the alternative with the best cost/benefit ratio that satisfies the requirements will be chosen as the preferred alternative, and will be recommended for further definition and design. Preparation of budget estimates for the recommended alternative is also required. Budget estimates made in this phase will impact all the resources and will be used in Phase III, Definition and Design, to aid further analysis.

Product/Result: Select Alternative and Estimate Budget  
Document Reference: NAVDAC Publication 24.1, FIPS PUB 64  
Level of Effort (person-days): 25  
Elapsed Time (days): 15  
Average Staff Required: 1.7 people  
Estimated Cost: \$8,000

#### Task 19: Prepare Acquisition Strategy Plan.

Description: The acquisition strategy plan is designed to provide the decision-maker with all the known facts, at each phase, that pertain to planned acquisitions. For each acquisition required, the Project Manager should provide: (1) a description of the acquisition, (2) source of resources (contractor vs. in-house), (3) cost estimate, (4) funding method, and (5) the estimated life of each contract.

As a minimum, for each acquisition, the Project Manager should prepare an acquisition POA&M showing the projected completion dates for the following: (1) specifications, (2) obtaining a delegation of procurement authority (DPA), (3) issuing Requests for Proposals (RFPs), and (4) awarding contract.

The Project Manager should determine if an Agency Telecommunications Request (ATR) is needed. If the telecommunications services or facilities desired exceed \$50,000 in annual lease or purchase costs, an ATR must be submitted to the General Services Administration (GSA) for review and approval.

Product/Result: Detailed Acquisition Plan

Document Reference: NAVDAC Publication 24.1; FIRMR 201-35.105, 106, 106-1, and 107; FIRMR 201-39.005-4, and .007

Level of Effort (person-days): 90

Elapsed Time (days): 30

Average Staff Required: 3.0 persons

Estimated Cost: \$28,800

#### Task 20: Prepare Configuration Management Plan.

Description: The Configuration Management Plan (CMP) is developed to define, document, control, implement, account for, and audit changes to the functional, ADP, and data communications components of the JPM Data Base prototype. Procedures for establishing and updating the functional baseline should also be documented in this phase.

Product/Result: Configuration Management Plan

Document Reference: NAVDAC Publication 24.1; MIL-STD 483 (USAF), 1521A (USAF), 482A, and 480A; Air Force Regulation (AFR) 300-15; DoD Directive 5010.19; and NAVMATINST 4130.1A

Level of Effort (person-days): 55

Elapsed Time (days): 25

Average Staff Required: 2.2 people

Estimated Cost: \$17,600

#### Task 21: Define Logistics Requirements.

Description: The logistics requirements documentation should identify logistic support areas and describe the strategies for supporting the JPM Data Base project. The costs for these items and methodology for determining costs should be included in an EA no later than the end of Phase III. Areas of investigation should be maintenance, personnel, and facility planning.

Product/Results: Logistics Documentation  
Document Reference: NAVDAC Publication 24.1; SECNAVINST 4000.29A; and  
OPNAVINST 4100.3A, 4105.2, and 3960.10A  
Level of Effort (person-days): 45  
Elapsed Time (days): 30  
Average Staff Required: 1.5 people  
Estimated Cost: \$14,400

Task 22: Define Training Requirements.

Description: The Functional Sponsor should identify those elements of the proposed JPM Data Base system that will require training, including hardware, software, and user functional training. The study should identify the training audience, possible training sources, the types of training (e.g., on-the-job, formal courses), and a proposed training schedule. The preliminary findings should be documented for further reference and modification later in the life-cycle.

Product/Result: Training Documentation  
Document Reference: NAVDAC Publication 24.1; MIL-STD 1379.B; and OPNAVINST 1500.8J  
Level of Effort (person-days): 7  
Elapsed Time (days): 5  
Average Staff Required: 1.4 people  
Estimated Cost: \$2,240

Task 23: Investigate Standardization and Interoperability.

Description: The Functional Sponsor should ensure that existing data bases are examined to determine if they can be modified to satisfy the prototype JPM Data Base requirements. A Standardization and Interoperability plan should state if the prototype will impact other DoD or Navy R&D efforts. The plan should also address the need for interagency or interactivity support agreements.

Product/Result: Standardization and Interoperability Plan  
Document Reference: NAVDAC Publication 24.1  
Level of Effort (person-days): 7  
Elapsed Time (days): 5  
Average Staff Required: 1.4 people  
Estimated Cost: \$2,240

Task 24: Develop Alternate Operations Strategy.

Description: The Alternate Operations Strategy confirms to Functional Sponsor officials and NAVDAC that the Project Manager has planned for an alternate course of action in the event the selected alternative does not meet its stated objectives.

Product/Result: Completed Alternate Operations Strategy  
Document Reference: NAVDAC Publication 24.1  
Level of Effort (person-days): 5  
Elapsed Time (days): 5  
Average Staff Required: 1 person  
Estimated Cost: \$1,600

#### Task 25: Develop Data Communications Plan.

Description: The Data Communications Plan for the prototype JPM Data Base needs to be developed and updated throughout the life-cycle. In Phase II, the development of a concept and topological structure for the proposed data communications network is of primary importance. NAVPERSRANDCEN should also identify who needs the information, where the information will be going, the media that will be transferred (printouts, tape, screen images, etc.), and what capacity will be required (e.g., 1,200 or 9,600 bits per second). NAVPERSRANDCEN can use the results of the Needs Assessment and the GFR to determine data communications needs.

Product/Result: Initial Data Communications Plan  
Document Reference: NAVDAC Publication 24.1  
Level of Effort (person-days): 25  
Elapsed Time (days): 15  
Average Staff Required: 1.7 people  
Estimated Cost: \$8,000

#### Task 26: Prepare System Decision Paper No. 1.

Description: SDPs are required at the end of Phases II, III, IV, and V. An SDP summarizes the project to date, the alternatives considered, progress during the period, and the other key issues. SDP No. 1 should address the continued validity of the MENS, and briefly describe the need for and functions of the JPM Data Base. SDP No. 1 should have four appendices: (1) General Functional Requirements, (2) Economic Analysis, (3) Budget Exhibits, and (4) Data Communications Plan. Upon completion, SDP No. 1 must be approved by the ADP.

Approval Authority, NAVDAC, and validated by the Functional Sponsor before entering Phase III.

Product/Result: Completion of SDP No. 1 (not to exceed 12 pages in length, excluding Appendices)  
Document Reference: NAVDAC Publication 24.2, SECNAVINST 5231.1B  
Level of Effort (person-days): 25  
Elapsed Time (days): 15  
Average Staff Required: 1.7 people  
Estimated Cost: \$8,000

#### Decision E: SDP No. 1 Approved.

Discussion: The ADP Approval Authority, NAVDAC, must approve SDP No. 1 before entering Phase III, Definition and Design.

Yes: Proceed to Phase III.  
No: Investigate problems, revise, and re-submit.

#### Phase III: Definition and Design

Phase III begins when NAVPERSRANDCEN starts elaborating on the selected concepts judged to be the most workable and ends with the approval of SDP No. 2. SDP No. 2 will recommend the best prototype JPM Data Base design. NAVPERSRANDCEN defines fully all functional requirements and then designs one or more data bases

satisfying the system performance specifications. The Functional Sponsor validates the technical adequacy of the data base designs, chooses the best data base design, and then approves prototype development.

Concurrent with defining functional requirements, the Functional Sponsor should begin reviewing the ADP procurement implementation procedures applicable to data base development.

Task 27: Develop Functional Description Document.

Description: The Functional Description Document (FD) is designed to provide a clear statement of the operational capability to be developed and provides a mutual understanding among all project participants of what is to be accomplished. The FD should describe the functions/subfunctions/processes the prototype needs to satisfy the GFR. The FD will focus on further defining the selected alternative.

Product/Result: Functional Requirements Document  
Document Reference: DoD-STD-7935; FIPS PUB 38; SECNAVINST 5233.1B  
Level of Effort (person-days): 45  
Elapsed Time (days): 25  
Average Staff Required: 1.8 people  
Estimated Cost: \$14,000

Task 28: Prepare Data Requirements Document.

Description: The Data Requirements Document (RD) provides as much detail as possible concerning the definition of required inputs, the procedures to provide these inputs, the expected input data, the specifications of all uses of the data, and the data elements to be stored on the JPM Data Base.

Product/Result: Data Requirements Document  
Document Reference: DoD-STD-7935; FIPS PUB 38; SECNAVINST 5233.1B  
Level of Effort (person-days): 45  
Elapsed Time (days): 25  
Average Staff Required: 1.8 people  
Estimated Cost: \$14,400

Task 29: Circulate FD, RD, CMP, the Logistics and Training Requirements, and the Transition and Alternate Operations Strategies for Review.

Description: The FD and RD must be reviewed and approved by the potential JPM Data Base users since the purpose of these documents is to further define their needs. The Logistics and Training Requirements and the Transition and Alternate Operations Strategies (hereinafter referred to as the "Support Plans") should also be reviewed by the users. These reviews will probably not be concurrent. The PM should ensure that they are circulated promptly.

Product/Result: Approved FD, RD, CMP, and Support Plans  
Document Reference: FIPS PUB 38  
Level of Effort (person-days): N/A  
Elapsed Time (days): 30  
Average Staff Required: N/A  
Estimated Cost: N/A

Decision F: All Plans in Task 29 Approved.

Discussion: Users must validate the FD and RD. Any office affected by any of the Support Plans should approve the Plan(s) before it is implemented.

Yes: Go to Task 30.

No: Go to appropriate Task and revise documents as necessary.

Task 30: Develop the Prototype Test Plan.

Description: The Prototype Test Plan (PT) is developed by NAVPERSRANDCEN to establish which tests will be performed, promulgate schedules, and identify responsibilities for testing and evaluating the JPM Data Base prototype during Phase IV. The PT should be updated as necessary throughout Phase III. Development Test and Evaluation (DT&E) should be planned for during Phase IV.

Program (module) Tests and System/Subsystem Tests should be planned if the application software is developed in-house or if individual programs, systems, or subsystems are contractor deliverables.

Product/Result: Prototype Test Plan

Document Reference: NAVDAC Publication 24.1; DoD-STD-7935; FIPS PUB 38, SECNAVINST 5233.1B.

Level of Effort (person-days): 85

Elapsed Time (days): 20

Average Staff Required: 4.3 persons

Estimated Cost: \$27,200

Task 31: Circulate PT for Review and Approval.

Description: The PT should be circulated to all activities that will be involved in prototype testing for their review and approval. Users should verify the evaluation criteria so they can determine if the criteria meets their needs.

Product/Result: Approved PT

Document Reference: None

Level of Effort (person-days): N/A

Elapsed Time: 15

Average Staff Required: N/A

Estimated Cost: N/A

Decision G: Contract Out For JPM Data Base Development.

Discussion: NAVPERSRANDCEN should decide whether or not to contract for the development of the prototype JPM data base. The decision can be based on the A-76 study and/or other Phase III documentation. If contracting for software is necessary, a solicitation document for the work must be prepared.

Yes: Go to Task 32.

No: Go to Task 33.



### Task 32: Implement Acquisition Strategy.

**Description:** The Functional Sponsor should begin the process of implementing the acquisition strategy developed in Phase II. If the A-76 study determined that either the software, hardware, and/or telecommunications portions of the project need to be contracted out, RFP preparation (if the amount of assistance is more than \$25,000) should begin now. This strategy can be implemented anywhere in the LAMP where the need for contracting arises.

The portions of the FD that relate to software, hardware, or telecommunications must be reviewed and written as technical specifications and/or a statement of work (SOW). The technical specifications must also include all pertinent information from the RD. Although technical in nature, the specifications should be written in functional terms. The specifications should be written as Section C of the RFP.

All contract actions in excess of \$10,000 must be summarized in the Commerce Business Daily (CBD). The synopsis must appear at least 15 days before the release of the RFP. Evaluation factors other than price must be identified in the RFP. The RFP shall specify the significant evaluation factors and the relative importance the Government places on the evaluation factors. The evaluation factors for award are contained in Section M of the uniform contract format.

Sections C and M are submitted to the Contracting Officer (CO) for review. The CO completes other sections of the RFP as necessary and releases it for bids. An evaluation and selection guide should be prepared for the RFP to help select the winning vendor.

An Operational Capability Demonstration (OCD) package must be available to vendors at the same time the RFP is released. An OCD evaluation and selection guide should also be produced to enable selection of the winning vendor(s).

A pre-proposal conference may be held to brief prospective offers after the solicitation has been issued but before the offers are submitted. Although this conference is optional, NAVPERSRANDCEN can explain complicated prototype specifications and requirements before receiving responses.

The CO must allow at least 30 days from the date of release of the RFP for receipt of proposals. Responses from vendors are then evaluated for their ability to meet the technical requirements (both mandatory and evaluated optional features). Once cost proposals are evaluated, the OCD conducted, and best and final offers are reviewed, the winning vendor can be selected and award made.

**Note.** This process may need to be repeated for every portion of the prototype JPM Data Base that needs to be contracted out.

Product/Result: RFP issued, vendor selected, and contract awarded  
Document Reference: FAR 15.406, 409; FAR 15.6; FIRMR 201-32.108  
Level of Effort (person-days): 175  
Elapsed Time (days): 140  
Average Staff Required: 1.3 people  
Estimated Cost: \$56,000

### Task 33: Develop Prototype System/Subsystem Specifications.

Description: The purpose of the system/subsystem specifications (SS) is to specify for analysts and programmers the requirements, operating environment, design characteristics, and program specifications for a system or subsystem. For each system or subsystem, the SS describe the general system design and concentrate on defining the system modules, the functions performed in each module, and the relationships between the modules.

Product/Result: Prototype System/Subsystem Specifications  
Document Reference: DoD-STD-7935; FIPS PUB 38; SECNAVINST 5233.1B  
Level of Effort (person-days): 240  
Elapsed Time (days): 40  
Average Staff Required: 6.0 people  
Estimated Cost: \$76,800

### Task 34: Conduct System Design Review.

Description: The System Design Review (SDR) is conducted when the design effort has progressed to the point that the prototype system characteristics and the design approach are defined and the software modules are identified. These modules are sometimes referred to as Computer Program Configuration Items (CPCIs). This review establishes the allocated baseline.

Product/Result: Approved prototype System/Subsystem characteristics  
Document Reference: MIL-STD-1521A (USAF)  
Level of Effort (person-days): 31  
Elapsed Time (days): 10  
Average Staff Required: 3.1 people  
Estimated Cost: \$9,920

### Decision H: SS Approved.

Discussion: Based on the SDR, the SS are either approved or not approved. Approval of the SS means that the project can proceed into preparation of the preliminary design of the program modules, the software development test plan, and the prototype JPM Data Base.

Yes: Go to Task 35.

No: Return to Task 34 and revise as necessary.

### Task 35: Design JPM Data Base Software Modules, Structure, and Organization.

Description: Design of the prototype JPM Data Base software modules (as specified in the SS) should begin so the preliminary design of the prototype can start. Functions stated in the SS are allocated to individual computer programs. The purpose of treating this as a separate task is to provide for a review before the final design of the JPM Data Base specifications.

Product/Result: Preliminary Data Base Structure and Organization  
Document Reference: MIL-STD-1521A (USAF)  
Level of Effort (person-days): 425  
Elapsed Time (days): 90  
Average Staff Required: 4.7 people  
Estimated Cost: \$136,000

Task 36: Develop the Prototype JPM Data Base Specifications.

Description: The Data Base Specifications (DS) are prepared to describe the storage allocation and the physical prototype JPM Data Base organization. The DS provide basic design data necessary for the construction of system files, tables, dictionaries, and directories. The DS should describe existing data bases that have been identified as usable by NAVPERSRANDCEN (as is or with modifications) and any new data base(s) that will have to be created.

Product/Result: JPM Data Base Specifications  
Document Reference: DoD-STD-7935; FIPS PUB 38; SECNAVINST 5233.1B  
Level of Effort (person-days): 120  
Elapsed Time (days): 20  
Average Staff Required: 6.0 people  
Estimated Cost: \$38,400

Task 37: Develop Software (Program), Hardware, and Telecommunication Specifications.

Description: The purpose of the Program Specifications (PS) is to specify the requirements, operating environment, and design characteristics of the JPM computer program(s) in sufficient detail to permit program coding and testing. Hardware and telecommunication specifications are also needed for prototype design.

Product/Result: Program Specifications  
Document Reference: DoD-STD-7935; FIPS PUB 38; SECNAVINST 5233.1B  
Level of Effort (person-days): 130  
Elapsed Time (days): 20  
Average Staff Required: 6.5 people  
Estimated Cost: \$41,600

Task 38: Conduct Preliminary Design Review.

Description: The Preliminary Design Review (PDR) is conducted to approve the product baseline for each configuration item in order to evaluate the progress and technical adequacy of the selected design approach. All items reviewed at this time should be compared to the FD and SS.

Product/Result: Approved Preliminary Design  
Document Reference: DoD-STD-1521A (USAF)  
Level of Effort (person-days): 35  
Elapsed Time (days): 15  
Average Staff Required: 2.3 people  
Estimated Cost: \$11,200

Decision I: Preliminary Design Acceptable.

Discussion: Based on the PDR, the preliminary designs are either approved or not approved. Approval of the preliminary designs means that the detailed designing can begin. The preliminary designs can be reviewed on a flow basis.

Yes: Go to Task 39.

No: Return to the appropriate Task(s) and revise the preliminary design as necessary.

Task 39: Update the Prototype Test Plan.

Description: With the completion of the DS and PS, the Prototype Test Plan (PT) can be updated. The PT should include detailed specifications, descriptions and procedures, test data reduction, and evaluation criteria for all tests.

Product/Result: Prototype Test Plan

Document Reference: DoD-STD-7935; FIPS PUB 38

Level of Effort (person-days): 95

Elapsed Time (days): 25

Average Staff Required: 3.8 people

Estimated Cost: \$30,400

Task 40: Prepare System Decision Paper No. 2.

Description: system Decision Paper No. 2 (SDP No. 2) should summarize the JPM Data Base prototype design and the reasons for selecting the design. Significant changes in costs, benefits, savings, and risks from previous economic analyses (EAs) should be presented. Identify any significant changes to functional requirements since Phase II that impacted the selection of alternatives. SDP No. 2 should summarize the schedule of events accomplished in Phase III, the resources expended to date, the acquisition strategy, and the configuration management, training, logistics privacy (if applicable), standardization and interoperability, software, and data communications plans.

SDP No. 2 should have the following Appendices attached: (1) Economic Analysis, (2) Budget Exhibits, and (3) Data Communications Plan. Upon completion, SDP No. 2 must be approved by the ADP Approval Authority (NAVDAC), and validated by the Functional Sponsor.

Product/Result: Completed SDP No. 2 (not to exceed 20 pages, excluding Appendices)

Document References: NAVDAC Publication 24.2; SECNAVINST 5231.1B

Level of Effort (person-days): 25

Elapsed Time (days): 15

Average Staff Required: 1.7 people

Estimated Cost: \$8,000

Decision J: SDP No. 2 Approved.

Discussion: SDP No. 2 must be approved by the ADP Approval Authority (NAVDAC) before entering Phase IV, System Development.

Yes: Proceed to Phase IV, System Development.

No: Investigate problem(s), revise, and resubmit.

#### Phase IV: System Development

Phase IV begins when the Functional Sponsor develops an Implementation Plan for the JPM Data Base prototype and ends when the prototype is approved for deployment.

##### Task 41: Develop Prototype Implementation Plan.

Description: The purpose of the Implementation Plan (IP) is to provide necessary information to functional users and processing personnel to accomplish the installation of the prototype data base and achieve operational status at additional sites.

Product/Result: Completed IP  
Document Reference: DoD-STD-7935  
Level of Effort (person-days): 40  
Elapsed Time (days): 10  
Average Staff Required: 4.0 people  
Estimated Cost: \$12,800

##### Task 42: Circulate IP for Review and Approval.

Description: The IP should be reviewed and approved by functional users and data processing personnel responsible for installing the prototype JPM Data Base.

Product/Result: Approved IP  
Document Reference: None  
Level of Effort (person-days): N/A  
Elapsed Time (days): 20  
Average Staff Required: N/A  
Estimated Cost: N/A

##### Task 43: Prepare Users Manual.

Description: The Users Manual (UM) will describe the functions performed by the system in non-ADP terminology so that the users can determine how to use the prototype. It should serve as a reference document for the preparation of input data and parameters and for the interpretation of results.

Product/Result: Users Manual  
Document Reference: DoD-STD-7935; FIPS PUB 38; SECNAVINST 5233.1B  
Level of Effort (person-days): 70  
Elapsed Time (days): 15  
Average Staff Required: 4.7 people  
Estimated Cost: \$22,400

##### Task 44: Prepare Computer Operations Manual.

Description: The Computer Operations Manual (OM) will provide computer control and operator personnel with a detailed description of the prototype JPM Data Base and its associated environment.

Product/Result: Computer Operations Manual  
Document Reference: DoD-STD-7935; FIPS PUB 38; SECNAVINST 5233.1B  
Level of Effort (person-days): 70  
Elapsed Time (days): 15  
Average Staff Required: 4.7 people  
Estimated Cost: \$22,400

Task 45: Prepare Program Maintenance Manual.

Description: The Program Maintenance Manual (MM) will provide the maintenance programmer with the information necessary to understand prototype JPM Data Base programs their operating environment, and their maintenance procedures

Product/Result: Program Maintenance Manual  
Document Reference: DoD-STD-7935; FIPS PUB 38; SECNAVINST 5233.1B  
Level of Effort (person-days): 70  
Elapsed Time (days): 15  
Average Staff Required: 4.7 people  
Estimated Cost: \$22,400

Task 46: Conduct Training.

Description: All users and ADP personnel must be trained to operate the JPM Data Base prototype. Condensed versions of the Users Manual, Computer Operations Manual, and Program Maintenance Manual are distributed and classroom instruction may be offered by NAVPERSRANDCEN. Once the prototype is assembled hands-on training can begin.

Product/Result: Trained users and ADP personnel  
Document Reference: Training documentation (Task 32)  
Level of Effort (person-days): 125  
Elapsed Time (days): 30  
Average Staff Required: 4.2  
Estimated Cost: \$40,000

Task 47: Obtain/Create Prototype Data Base.

Description: During the requirements definition, existing data bases that could be used by the JPM project should have been identified. If any were found, these data bases are obtained and modified as described in the DS. The DS should assist NAVPERSRANDCEN to create the prototype JPM Data Base. The prototype should account for programming and data entry operations.

Product/Result: Create the prototype JPM Data Base  
Document Reference: Data Base Specifications  
Level of Effort (person-days): 1040  
Elapsed Time (days): 260 (1 year)  
Average Staff Required: 4.0 people  
Estimated Cost: \$332,800

Task 48: Develop New JPM Data Base Software.

Description: Software for the prototype JPM Data Base may need to be developed. The Software Development Test Plan and the Prototype Test Plan can provide programmers with the information required for the prototype JPM Data Base. New programs will be coded, compiled, and tested.

Product/Result: Prototype JPM Data Base software  
Document Reference: None  
Level of Effort (person-days): 1300  
Elapsed Time (days): 260  
Average Staff Required: 5.0 people  
Estimated Cost: \$416,000

Task 49: Conduct Preliminary Functional Configuration Audit (FCA) and Physical Configuration Audit (PCA).

Description: Configuration audits are conducted to determine whether a software module conforms to specifications and standards. The FCA is intended to validate whether a program's actual performance complies with the SS. The PCA is a formal comparison of the coded version of the programs with the technical documentation. The PCA establishes a product baseline.

Product/Result: Programs validated for performance and conformance with technical documentation  
Document Reference: MIL-STD-1521A (USAF)  
Level of Effort (person-days): 50  
Elapsed Time (days): 30  
Average Staff Required: 1.7  
Estimated Cost: \$16,000

Task 50: Conduct the Product Verification Review.

Description: The Product Verification Review (PVR) is conducted to approve the product baseline and to ensure that preparations for system testing have been completed.

Product/Result: Programs approved for testing  
Document Reference: Air Force Regulation (AFR) 700-4  
Level of Effort (person-days): 45  
Elapsed Time (days): 25  
Average Staff Required: 1.8 people  
Estimated Cost: \$14,400

Decision K: Prototype JPM Data Base and Software Approved.

Discussion: Based on the PVR, the prototype JPM Data Base and software is either approved or not approved. Once the data base and software is approved, they can be installed on selected hardware for initial testing.

Yes: Go to Task 51.

No: Return to appropriate Task, make corrections as necessary, and re-submit for the FCA, PCA, and PVR.

#### Task 51: Install Prototype Hardware.

Description: Hardware installation could take place where the prototype DT&E testing will occur. NAVPERSRANDCEN should have the site documented in the Implementation Plan (IP) and the Prototype Test Plan. Recording of serial numbers and the implementation of security controls should be completed.

Product/Result: Initial hardware installed for testing  
Document Reference: None  
Level of Effort (person-days): 40  
Elapsed Time (days): 10  
Average Staff Required: 4.0 people  
Estimated Cost: \$12,800

#### Task 52: Install Prototype Data Base and Software.

Description: The completed and approved JPM software and JPM Data Base are installed on the hardware for DT&E. This may require minor software changes for error-free operation on the hardware. Successful software installation enables the prototype to undergo DT&E.

Product/Result: Software and JPM Data Base installed on hardware  
Document Reference: None  
Level of Effort (person-days): 90  
Elapsed Time (days): 15  
Average Staff Required: 6.0 people  
Estimated Cost: \$28,800

#### Task 53: Install Telecommunications Service.

Description: Installation of telecommunications service should begin so prototype DT&E can begin.

Product/Result: Telecommunications ready for DT&E  
Document References: None  
Level of Effort (person-days): 130  
Elapsed Time (days): 30  
Average Staff Required: 4.3 people  
Estimated Cost: \$41,600

#### Task 54: Conduct Development Test and Evaluation.

Description: DT&E should be conducted according to the Prototype Test Plan. DT&E tests the prototype in as near as operational configuration and environment as practical. A Test Analysis Report (RT) should be prepared, summarizing DT&E up to this point.

Product/Result: Prototype acceptable for further analysis  
Document Reference: DoD-STD-7935  
Level of Effort (person-days): 120  
Elapsed Time (days): 20  
Average Staff Required: 6.0 people  
Estimated Cost: \$38,400



Decision L: Does Prototype JPM Data Base Pass DT&E?

Discussion: Successful completion of DT&E means that the prototype JPM Data Base can undergo further tests and Operational Test and Evaluation (OT&E) at additional sites. If the prototype does not pass DT&E, the problems must be corrected and DT&E re-run.

Yes: Go to Task 55.

No: Return to appropriate Task, solve problem, and re-run DT&E.

Task 55: Conduct OT&E.

Description: OT&E ensures that the prototype will satisfactorily perform the functions for which it is designed in the mission environment. The Functional Sponsor will conduct OT&E, and upon completion, prepare a test analysis report (RT).

Product/Result: Prototype JPM Data Base approved for final PCA/FCA

Document Reference: AFR 700-4, Volume I

Level of Effort (person-days): 120

Elapsed Time (days): 15

Average Staff Required: 8.0 people

Estimated Cost: \$38,400

Decision M: Does Prototype JPM Data Base Pass OT&E?

Discussion: If the prototype passes OT&E, it is ready for the final audits. Any problems must be fully documented and corrected before the PCA and FCA are conducted.

Yes: Go to Task 56.

No: Return to appropriate Task, correct the problem and redo OT&E.

Task 56: Prepare SDP No. 3.

Description: SDP No. 3 updates previous SDPs, and summarizes test and evaluation efforts conducted during Phase IV. Any problems encountered or conflicting viewpoints expressed by NAVPERSRANDCEN or NAVDAC officials should be documented. The following Appendices should be attached to SDP No. 3: (1) Economic Analysis and (2) Budget Exhibits.

Product/Result: Completed SDP No. 3 (not to exceed 20 pages, excluding Appendices)

Document Reference: NAVDAC Publication 24.2; SECNAVINST 5231.1

Level of Effort (person-days): 65

Elapsed Time (days): 25

Average Staff Required: 2.6 people

Estimated Cost: \$20,800

Decision N: SDP No. 3 Approved.

Discussion: SDP No. 3 must be approved by the ADP Approval Authority (NAVDAC) before proceeding to Phase V, Deployment and Operation.

Yes: Proceed to Phase V, Deployment and Operation.

No: Review, revise, and re-submit for approval.

### Phase V: Deployment and Operation

At the beginning of Phase V, the Functional Sponsor implements the approved operational plan, including extension or installation of the prototype JPM Data Base at additional sites. Preparation and approval of SDP No. 4 occurs concurrent with operation of the system and completes Phase V. The Functional Sponsor or a designated guardian operates and maintains the system in accordance with all functional and technical specifications, taking appropriate corrective action when necessary. When technological or functional obsolescence occurs, information technology is replaced or the JPM Data Base is modified, replaced, or terminated so as to satisfy functional requirements.

#### Task 57: Install Prototype at Additional Sites.

Description: After initial installation and testing is complete, the Functional Sponsor can install the prototype at other sites as appropriate. The installation can be phased, but must include all necessary hardware, software, and telecommunication networks.

Product/Result: Phased installation of the prototype JPM Data Base at selected sites

Document Reference: Implementation Plan

Level of Effort (person-days): 600

Elapsed Time (days): 75

Average Staff Required: 8.0 people

Estimated Cost: \$192,000

#### Task 58: Conduct Acceptance Inspection of Prototype.

Description: After the prototype has been determined functionally and technically adequate, the acceptance inspection process can begin. Inspection includes reviewing the hardware and software test and maintenance logs, a physical review of the operating environment(s), and the verification of system documentation. The inspection is performed by the Functional Sponsor and/or any other applicable user command.

Product/Result: Prototype inspection

Document Reference: None

Level of Effort (person-days): 90

Elapsed Time (days): 10

Average Staff Required: 9.0 people

Estimated Cost: \$28,800

#### Decision O: Is the Prototype Accepted for Full Development?

Discussion: Based on acceptance inspection results, the Functional Sponsor and prototype users should decide if the prototype JPM Data Base should undergo full development. Full development could include hardware, software, and data base modifications. Another LAMP may be needed to help manage the complete system from initial enhancement to full system commissioning.

Yes: Continue prototype operation and begin preparation for full development.

No: Modify prototype, conduct acceptance inspection again.

Task 59: Prepare SDP No. 4.

Description: SDP No. 4 should update the issues covered in the previous three SDPs. Special emphasis should be placed on documenting implementation issues, problems, and significant delays or cost increases. The decision on whether or not to continue the JPM Data Base project should be documented.

Product/Result: Completed SDP No. 4 (should not exceed 20 pages, excluding Appendices)

Document Reference: NAVDAC Publication 24.2

Level of Effort (person-days): 60

Elapsed Time (days): 40

Average Staff Required: 1.5 people

Estimated Cost: \$19,200

Decision P: SDP No. 4 Approved.

Discussion: SDP No. 4 is the last SDP in the LAMP. SDP No. 4 must be approved by the ADP Approval Authority (NAVDAC) and validated by the Functional Sponsor.

Yes: Continue with operations.

No: Solve problem, revise, and re-submit for approval.

**APPENDIX A**  
**BIBLIOGRAPHY AND GLOSSARY**

## BIBLIOGRAPHY AND GLOSSARY

This Appendix contains a glossary of terms and acronyms that are found throughout the LAMP and a list of references that NAVPERSRANDCEN may use to learn more about managing an automated information system acquisition.

### Glossary

The following acronyms are found in this section and throughout the LAMP:

AFR	Air Force Regulation
DoDD	Department of Defense Directive
DoD-STD	Department of Defense Standard
DoN	Department of the Navy
FAR	Federal Acquisition Regulation
FIPS PUB	Federal Information Processing Standards Publication
FIRMR	Federal Information Resource Management Regulation
GAO	General Accounting Office
IRM	Information Resources Management
MIL-STD	Military Standard
NAVDAC	Naval Data Automation Command
NAVMATINST	Navy Material Command Instruction
OMB	Office of Management and Budget
OPNAVINST	Office of the Chief of Naval Operations Instruction
RFP	Request for Proposal
RFQ	Request for Quotation
SECNAVINST	Secretary of the Navy Instruction

### References

The following references are found in the LAMP:

<u>Reference</u>	<u>Subject</u>
AFR 300-15	Procedures for Managing Automated Data Systems (Superceded)
AFR 700-4, Vol. 1	Information Systems Program Management and Acquisition, Information Systems Program Management
Department of Commerce RP-1	Standard Practice for the Fire Protection of Essential Electronic Equipment Operations
DoDD 5010.19	Configuration Management
DoDD 5400.11	Personal Privacy and Rights of Individuals Regarding Their Personal Records
DoD-STD-7935	DoD Automated Data Systems Documentation Standards
FAR 7.1	Acquisition Plans
FAR 15.406	Preparing RFPs and RFQs
FAR 15.409	Pre-proposal Conferences

Reference	Subject
FAR 15.6	Source Selection
FAR 15.605 (d)	Evaluation Factors
FAR 15.609	Competitive Range
FIPS PUB 38	Documentation for Computer Programs and Automated Data Systems
FIPS PUB 41	Computer Security Guidelines for Implementing the Privacy Act
FIPS PUB 46	Data Encryption Standard
FIPS PUB 48	Evaluation of Techniques for Personal Identification
FIPS PUB 64	Documentation for Computer Programs and Automated Data Systems
FIPS PUB 65	ADP Risk Analysis
FIPS PUB 96	Designing Charging Systems
FIRMR 201-24.211	Use of Functional Specifications
FIRMR 201-24.214, 215	ADP Acquisition Policies
FIRMR 201-30.007	Requirements Analysis
FIRMR 201-30.009	Analysis of Alternatives
FIRMR 201-30.012-1	Conversion Planning and Management Responsibility
FIRMR 201-32.108	Contracting for ADP Resources
FIRMR 201-32.204	Contracting for ADP Equipment
FIRMR 201-39.006-4	Major Changes and New Installations of Telecommunications Resources
FIRMR 210-23.105, 106, 106.1, and 107	Delegations of Authority
GAO Audit Guide of June 1981	Evaluating Internal Controls for Computer-Based Systems
MIL-STD-480A	Configuration Control--Engineering Changes, Deviations, and Waivers
MIL-STD-482A	Configuration Status Accounting Data, Elements, and Related Matters
MIL-STD-483 (USAF)	Configuration Management Practices for Systems, Equipment, Munitions, and Computer Programs
MIL-STD-1379B	Military Standard Contract Training Programs
MIL-STD-1521, 1521A, and 1521B	Technical Reviews and Audits for Systems, Equipment, and Computer Programs

Reference	Subject
NAVDAC Advisory Bulletin, #32	Project Manager Charter
NAVDAC Publication 15	Economic Analysis Procedures for ADP
NAVDAC Publication 24.1	Project Management Plan
NAVDAC Publication 24.2	System Decisions
NAVMATINST 4130.1A	Configuration Management
OMB Circular A-76 (Revised)	Performance of Commercial Activities
OMB Circular A-109	Major System Acquisition
OMB Circular A-130	OMB Federal IRM Authority
OMB Circular A-123	Internal Controls
OPNAVINST 1500.8J	Navy Training Plan Process in Support of New Developments
OPNAVINST 3050.18A	Contingency of Operations, Policies, and Planning
OPNAVINST 3960.10A (TEMP)	Test and Evaluation
OPNAVINST 4100.3A	DoN Integrated Logistics System
OPNAVINST 4105.2	Integrated Logistics Support, Management of Multiservice Communication Electronic Systems
OPNAVINST 5239.1A	DoN ADP Security Program
OPNAVINST 5510.1F, 45B	DoN Security Regulation and Manual
OPNAVINST 5540.8G	DoD Industrial Security Program
SECNAVINST 4000.29A	Development of Integrated Logistic Support for Systems/Equipment
SECNAVINST 4200.3I	Contractor Support Services
SECNAVINST 4860.44C	Commercial or Industrial Type Activities (CA) Program
SECNAVINST 5211.5C	Personal Privacy and Rights of Individuals
SECNAVINST 5231.1B	Life-cycle Management Policy and Approval Requirements for Information System (IS) Projects
SECNAVINST 5233.1B	Automated Data System Documentation Standards
SECNAVINST 5236.1B, .2A	ADP Contracting
SECNAVINST 5237.1	ADPE Reutilization Program
SECNAVINST 7000.14B	Economic Analysis and Program Evaluation for Navy Resources Management
SECNAVINST 7510.7A, .8	DoN Audit Manual and Internal Review

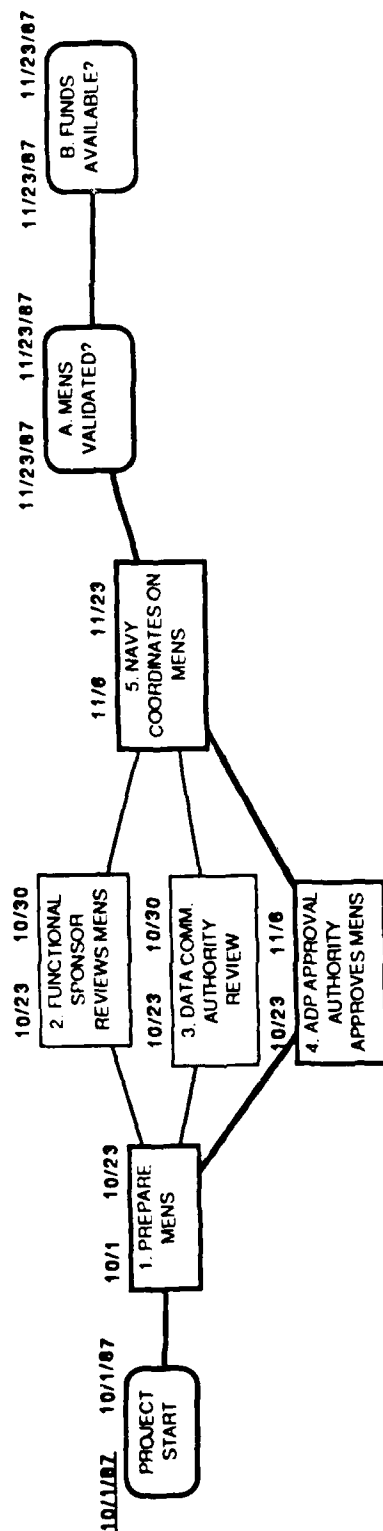
**APPENDIX B**  
**LAMP SCHEDULE CHART**

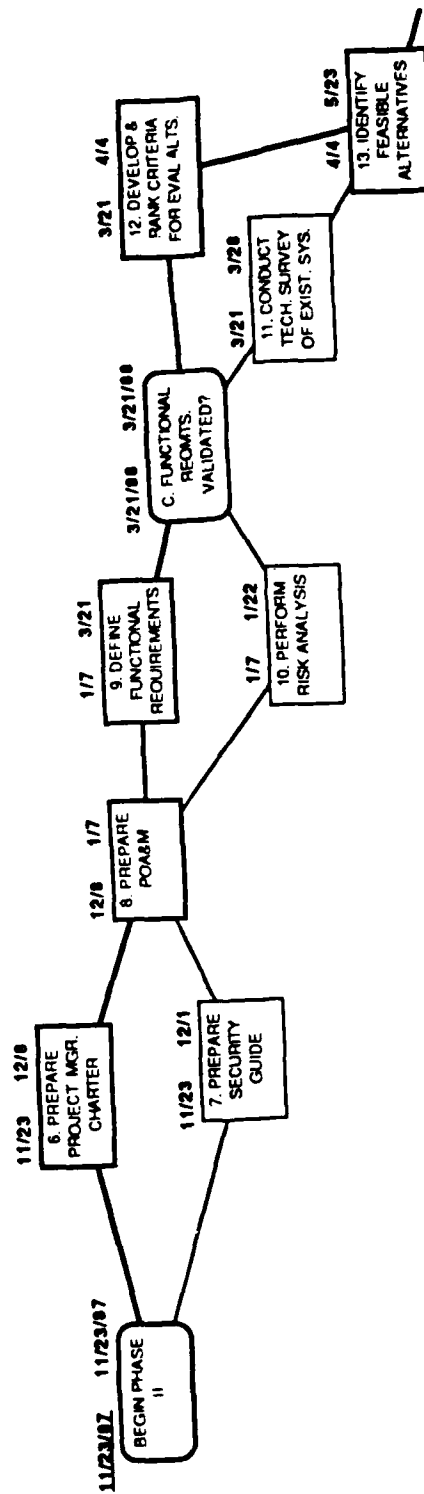


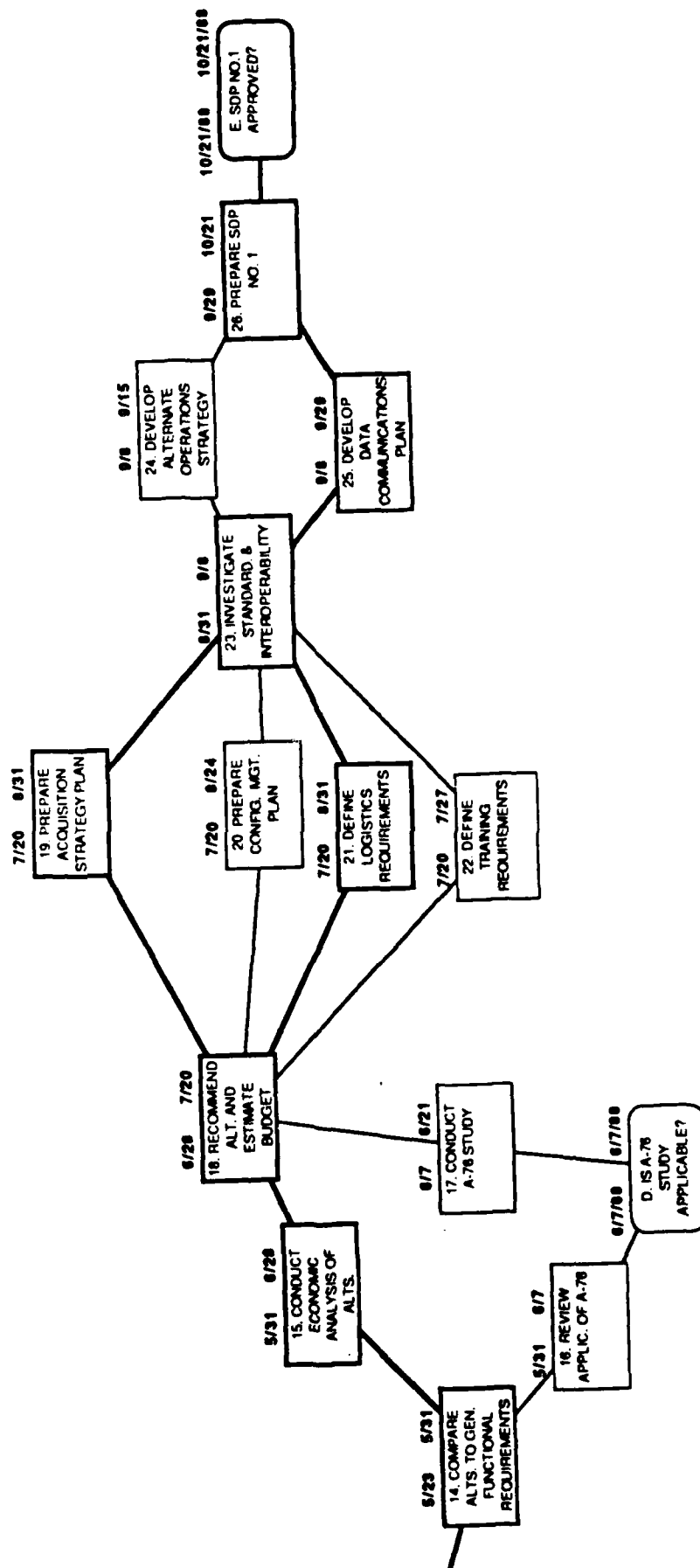
## **LAMP SCHEDULE CHART**

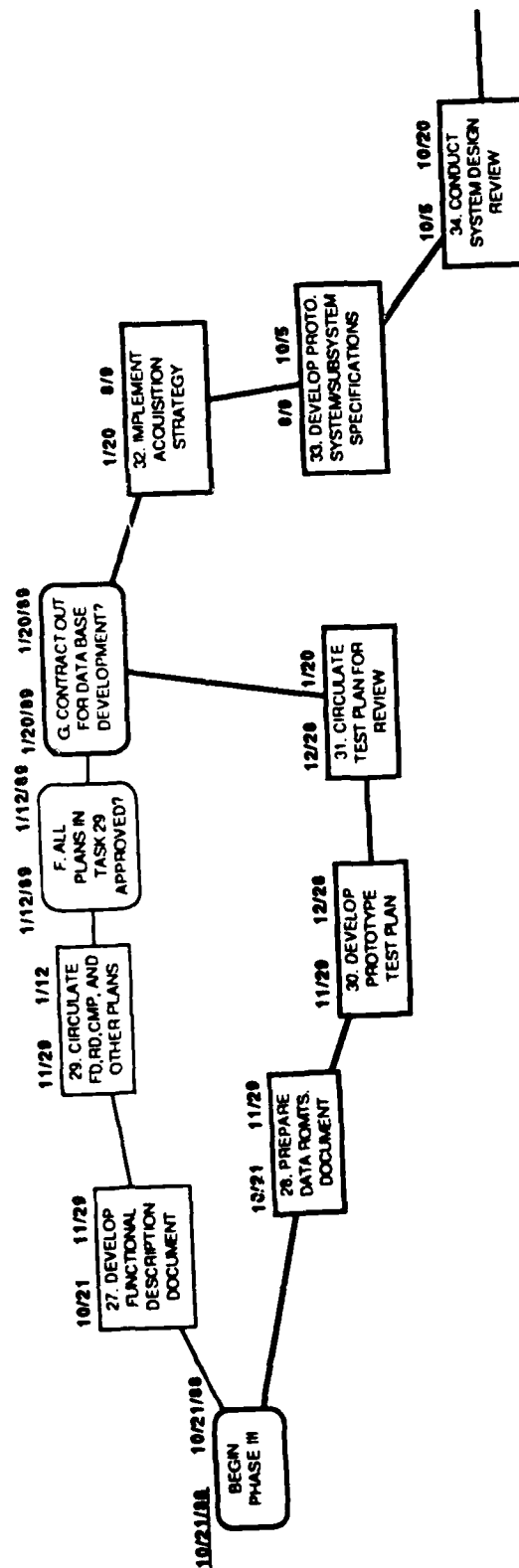
The following flow diagrams delineate the various tasks and relevant decision points subsumed in the Life-Cycle Automation Management Plan for the Navy's Job Performance Measurement Data Base.

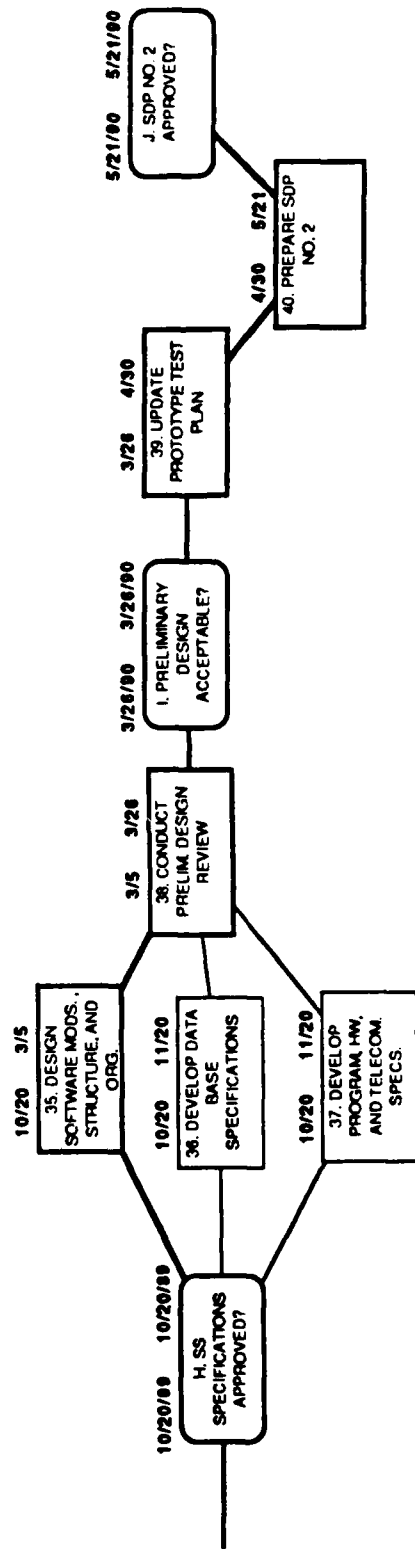
Completed events are denoted by asterisks. Changes are emphasized by bracketing.

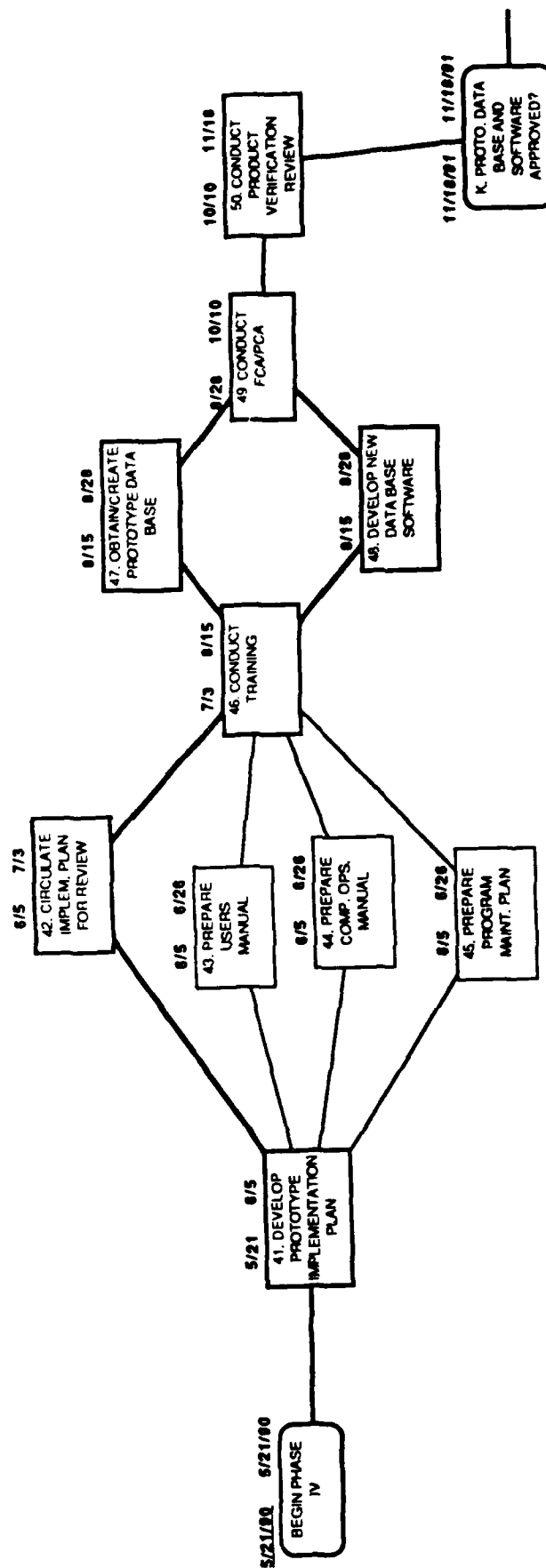


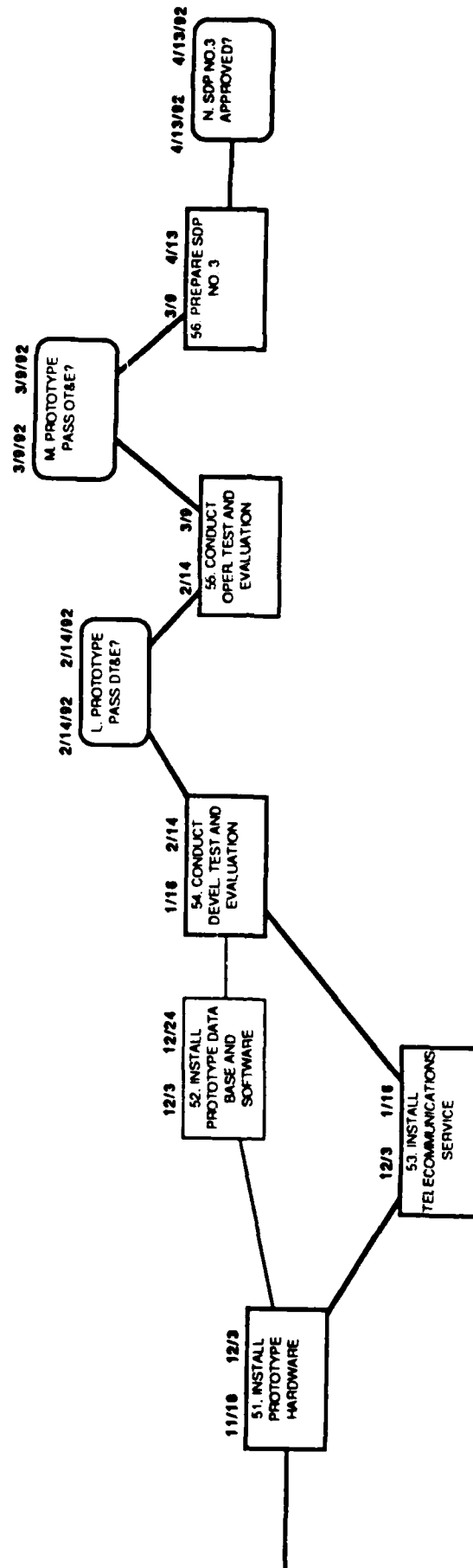




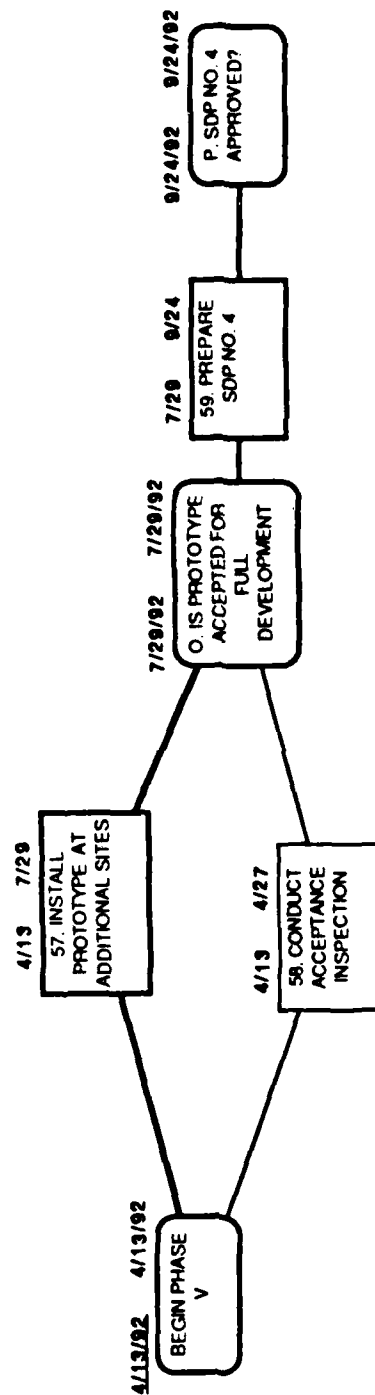












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